

FIG. 2A

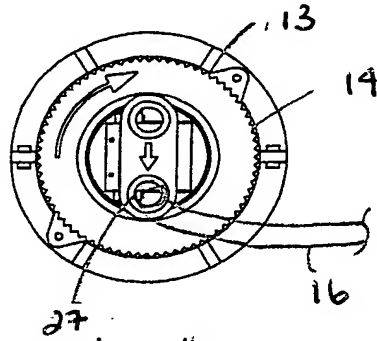


FIG. 2

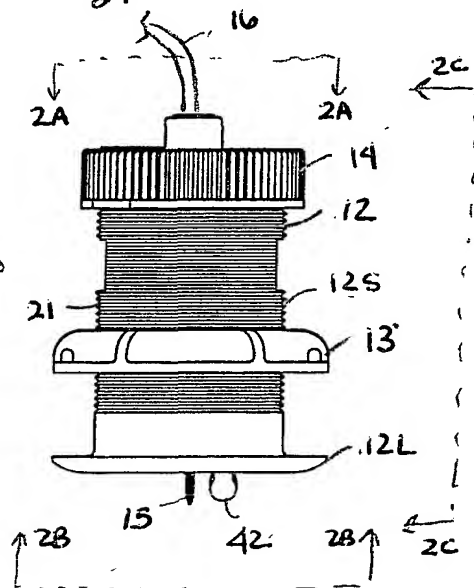


FIG. 2B

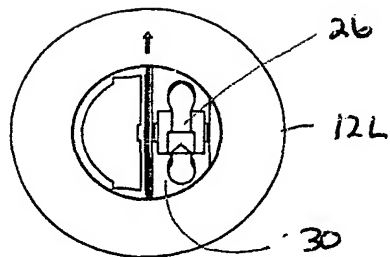


FIG. 1

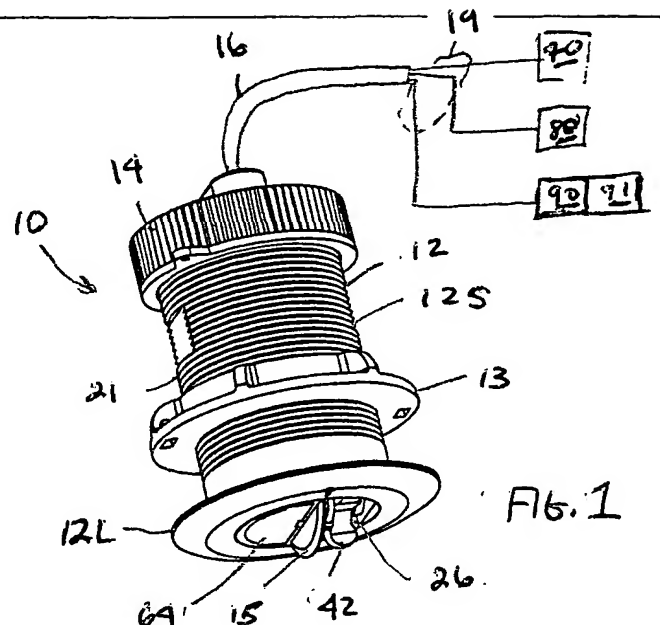
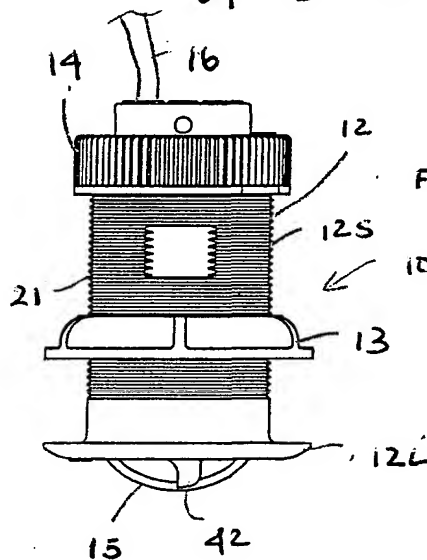


FIG. 2C



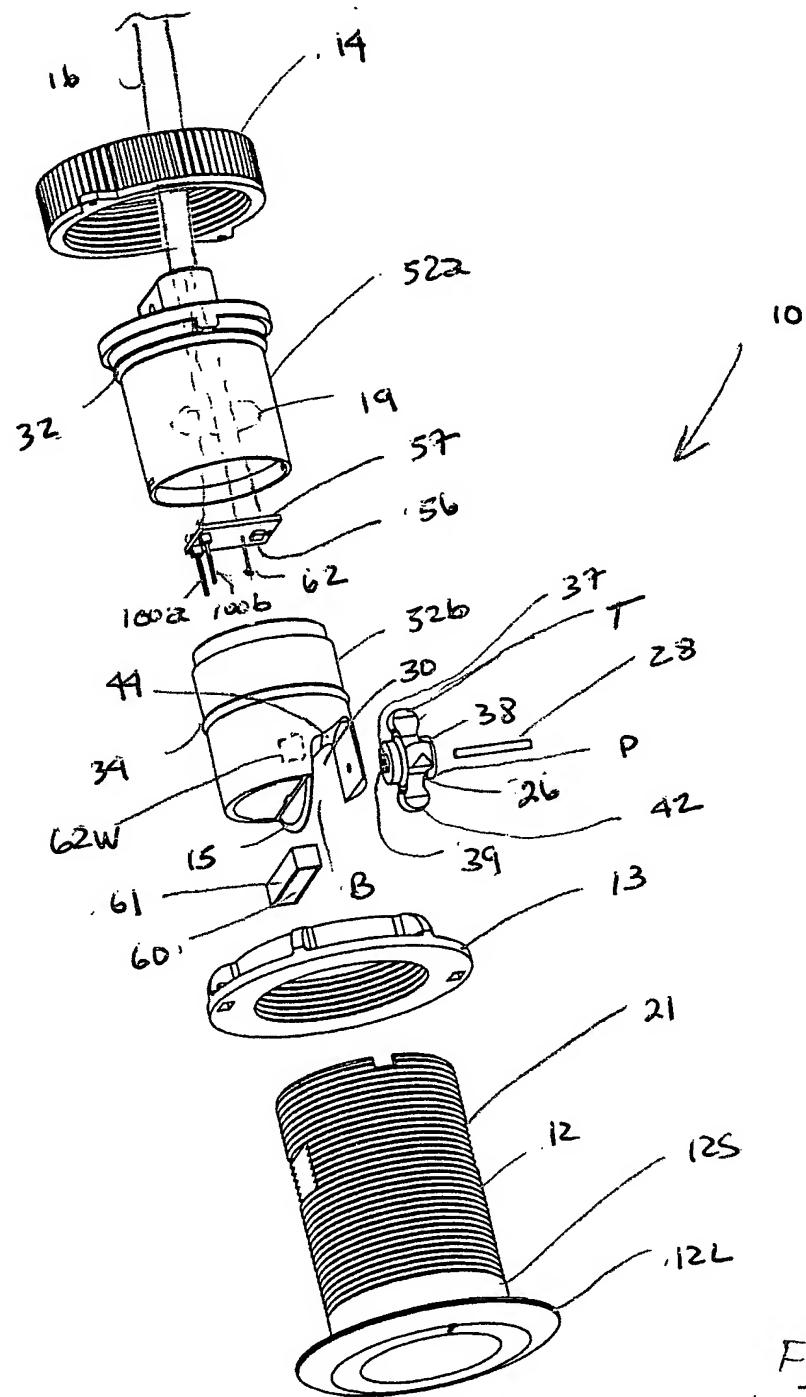
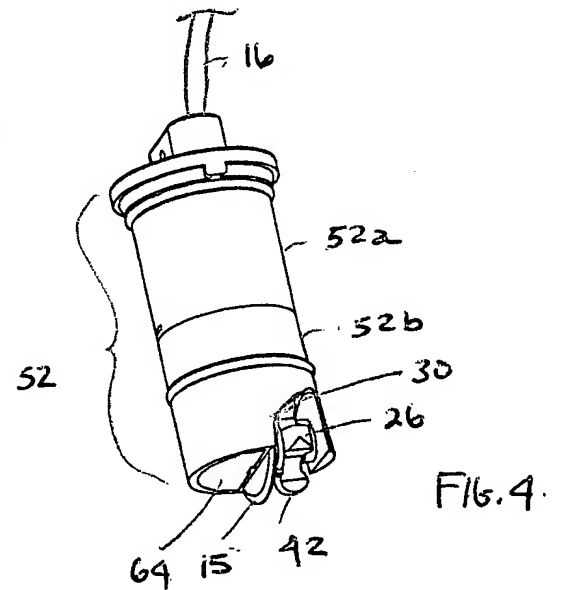
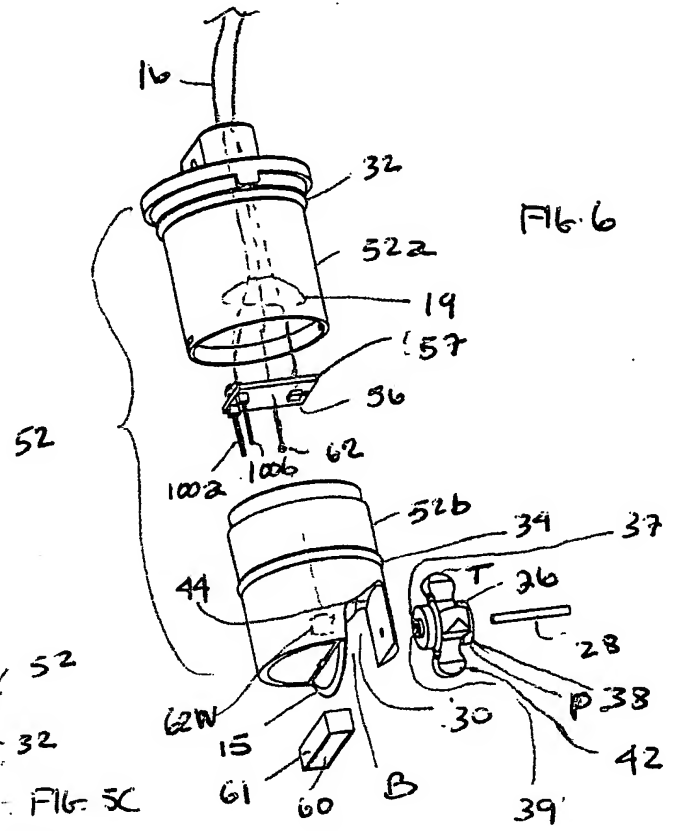
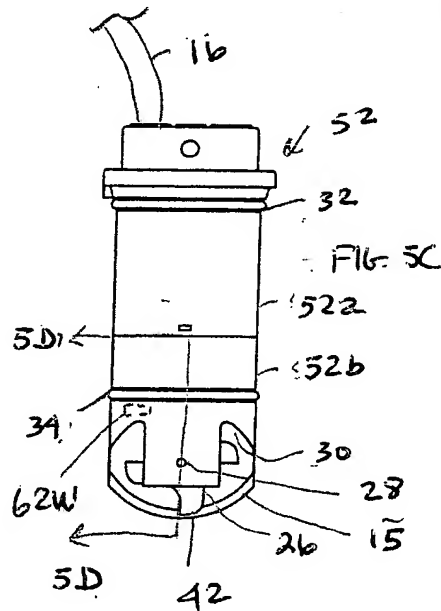
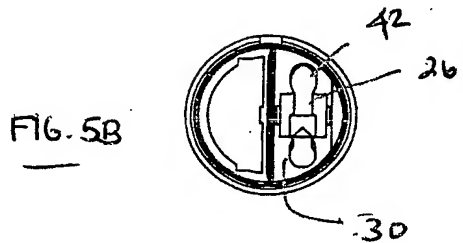
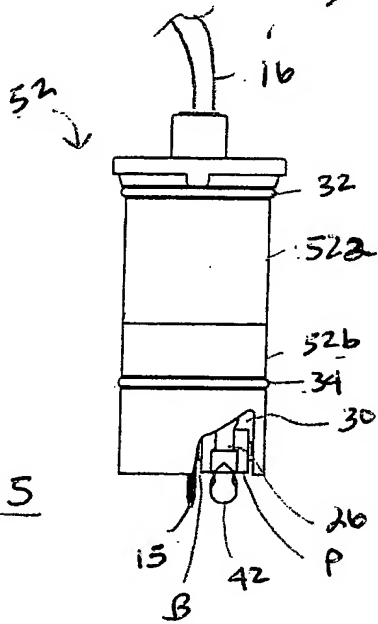
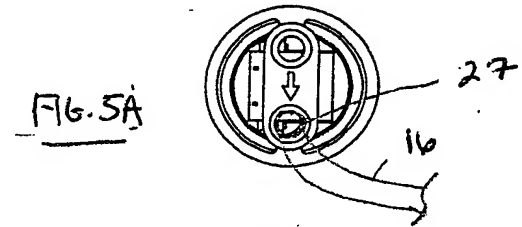
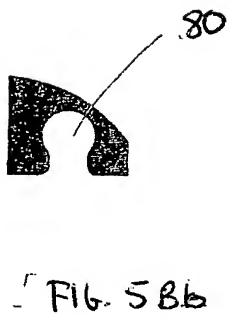
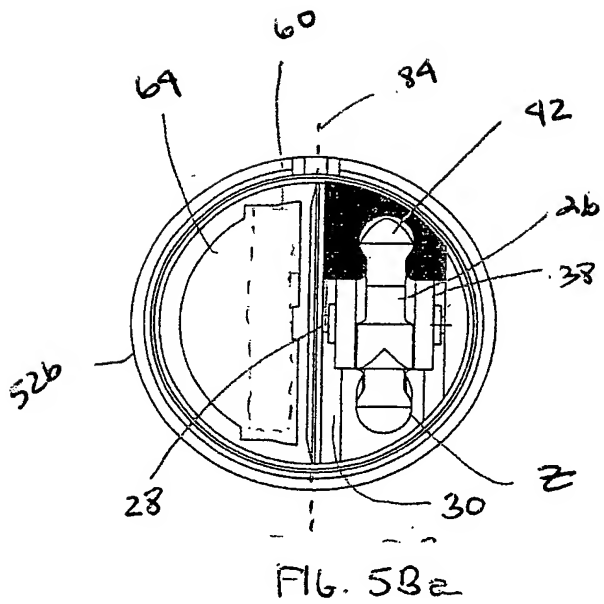


FIG. 3





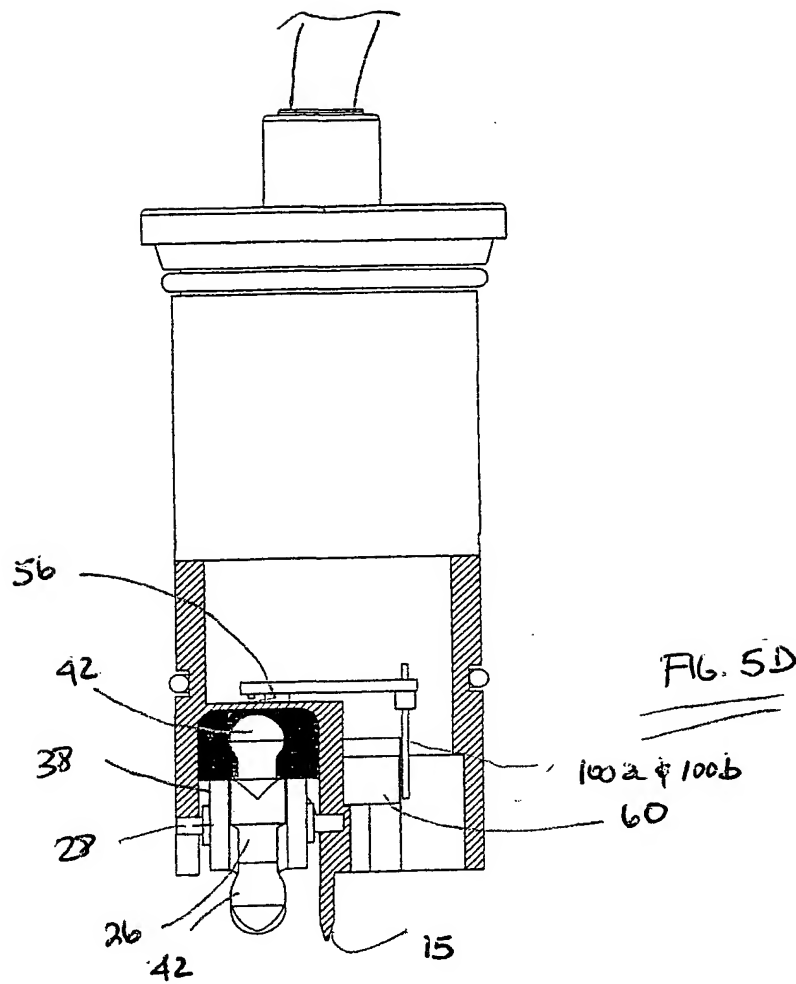
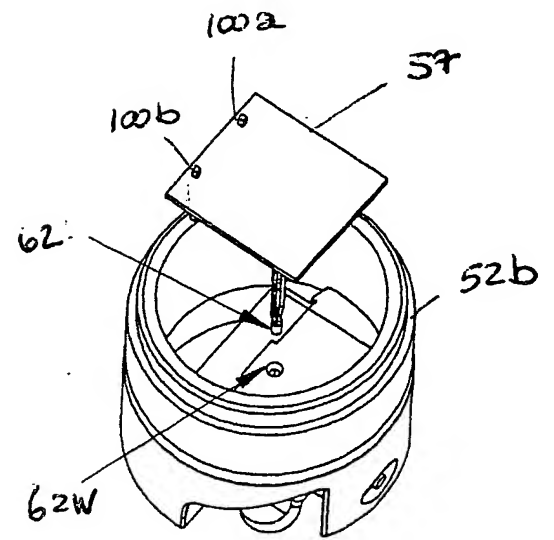
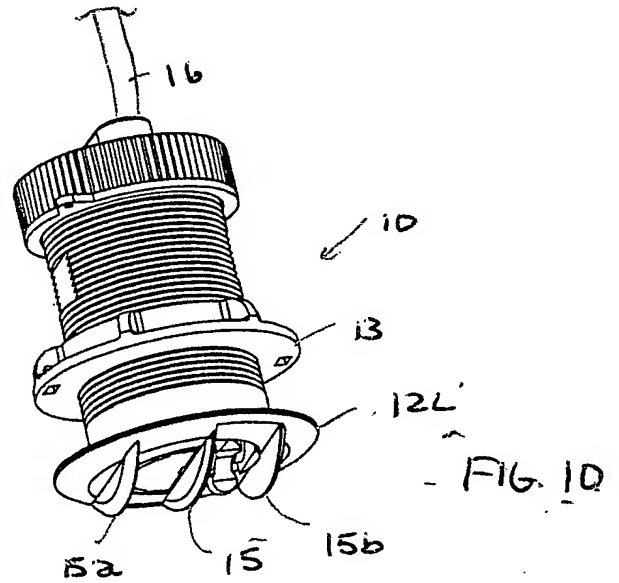
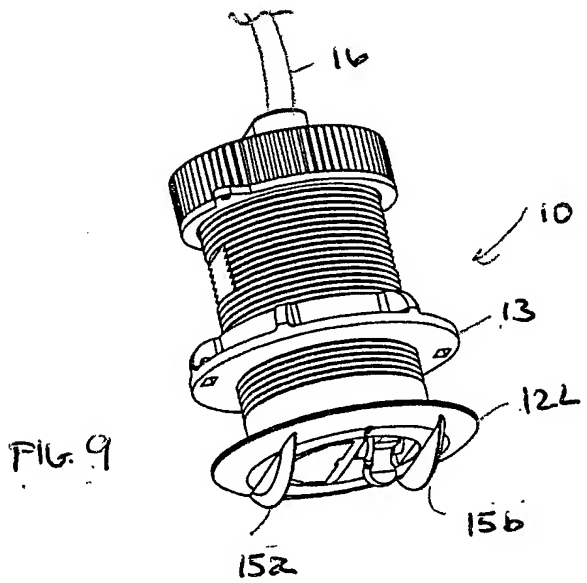
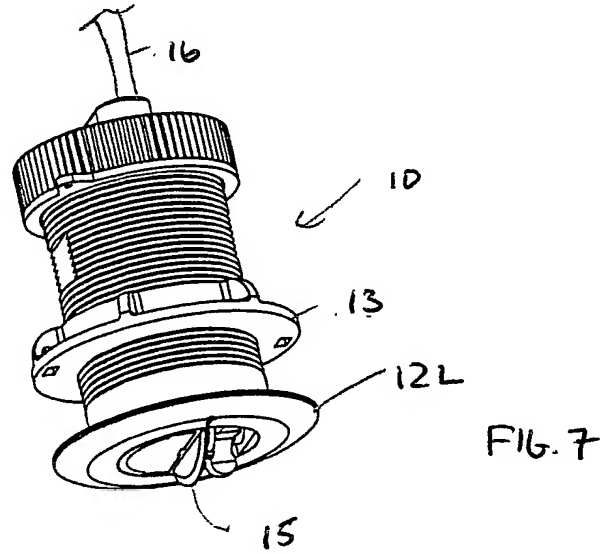
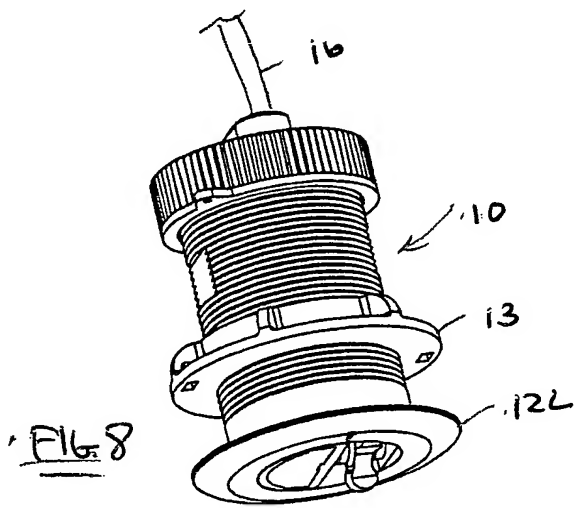


FIG. 5Da



FIG. 5Db





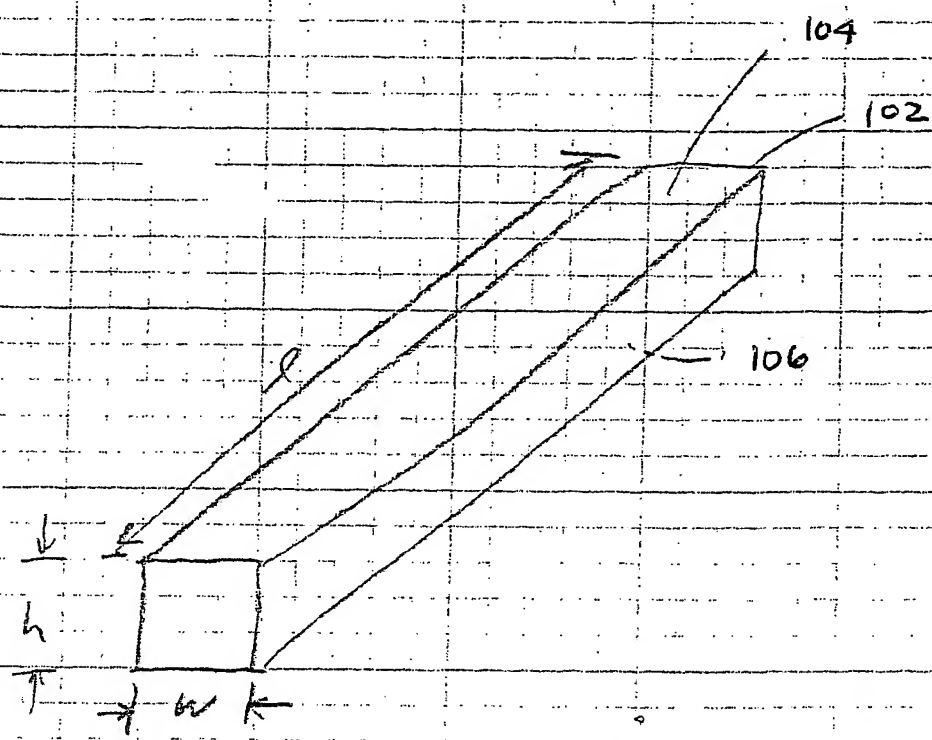


FIG 11



## DIRECTIVITY PATTERN

-3dB Beamwidth : 28 °  
-6dB Beamwidth : 41 °  
-10dB Beamwidth : 80 °

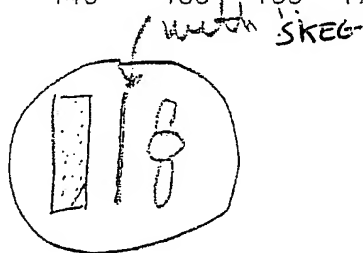
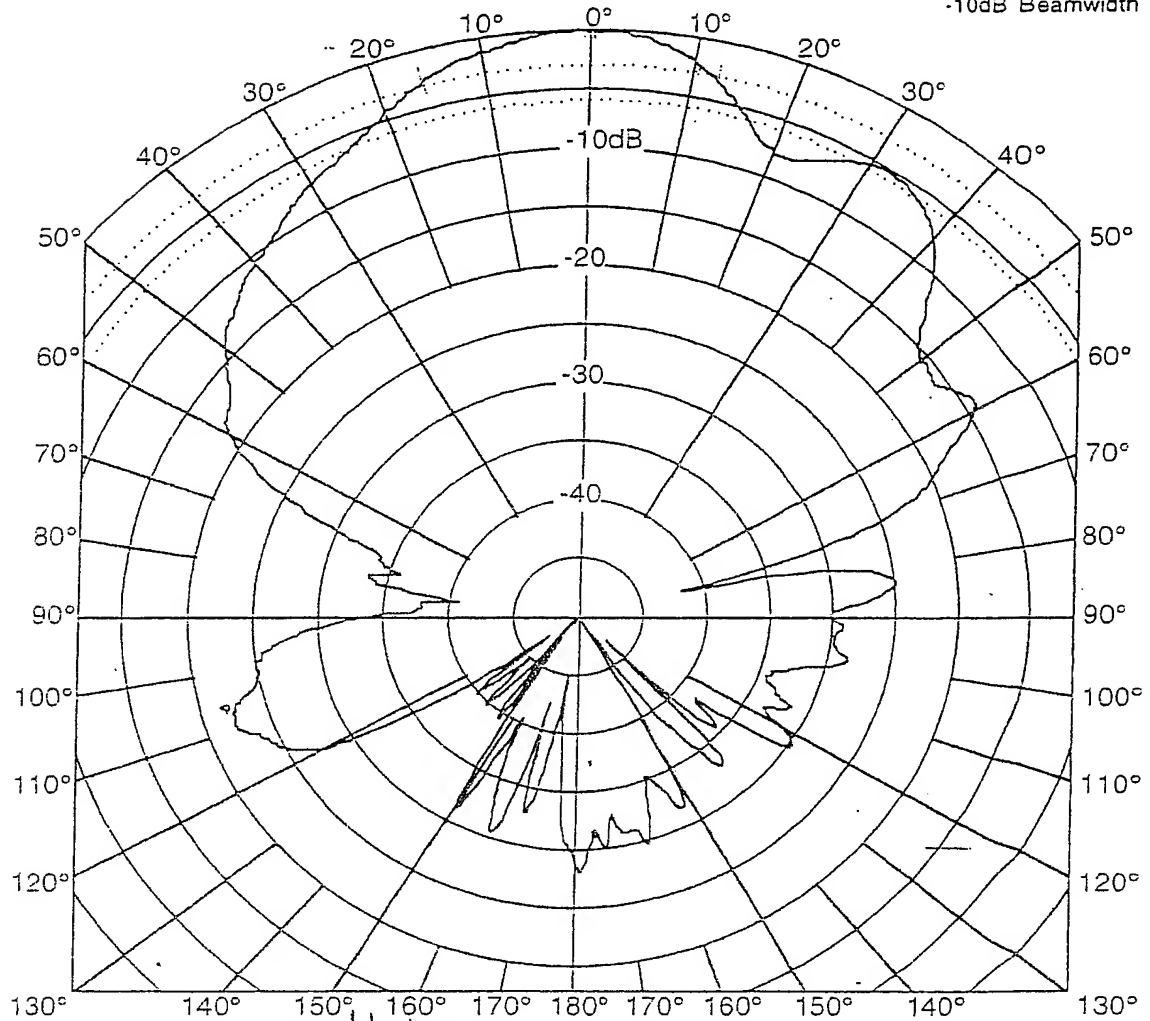
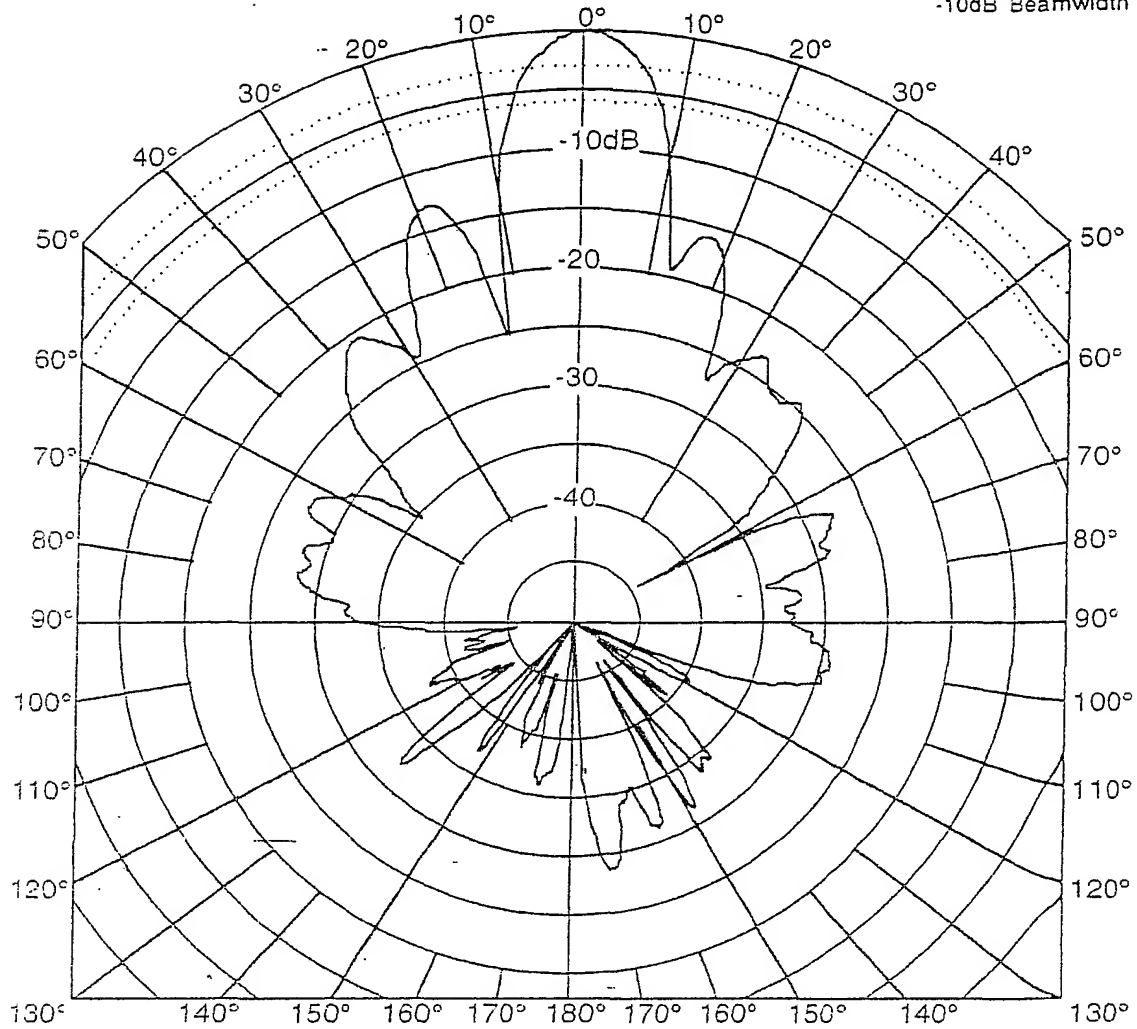


FIG. 12

## DIRECTIVITY PATTERN

-3dB Beamwidth : 11 °  
-6dB Beamwidth : 15 °  
-10dB Beamwidth : 19 °



*Mounted ceramic horizontally*

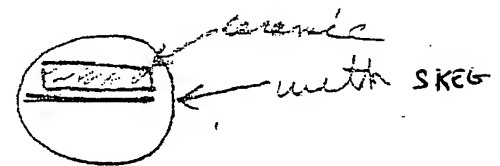
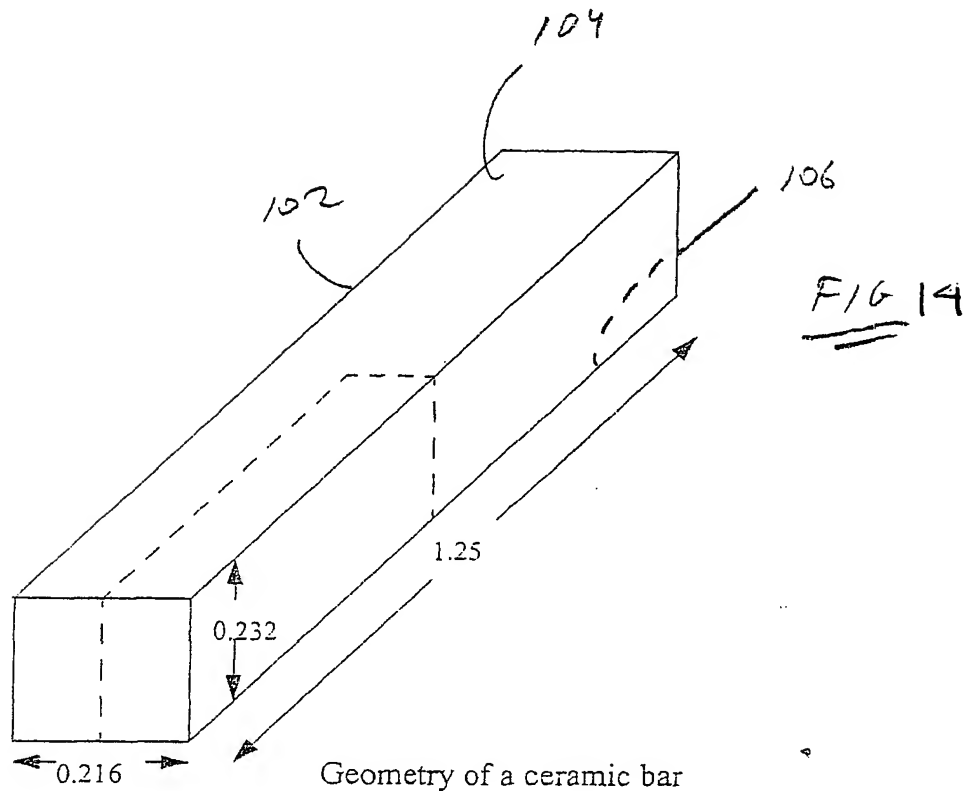


FIG. 13



Electrodes cover the top and bottom surface. Only one quadrant is modeled to take advantage of symmetry. Dimensions are in inches.

3D displacement map, one quadrant, for "good coupling" mode.

3D displacement map, for 'poor coupling' mode.

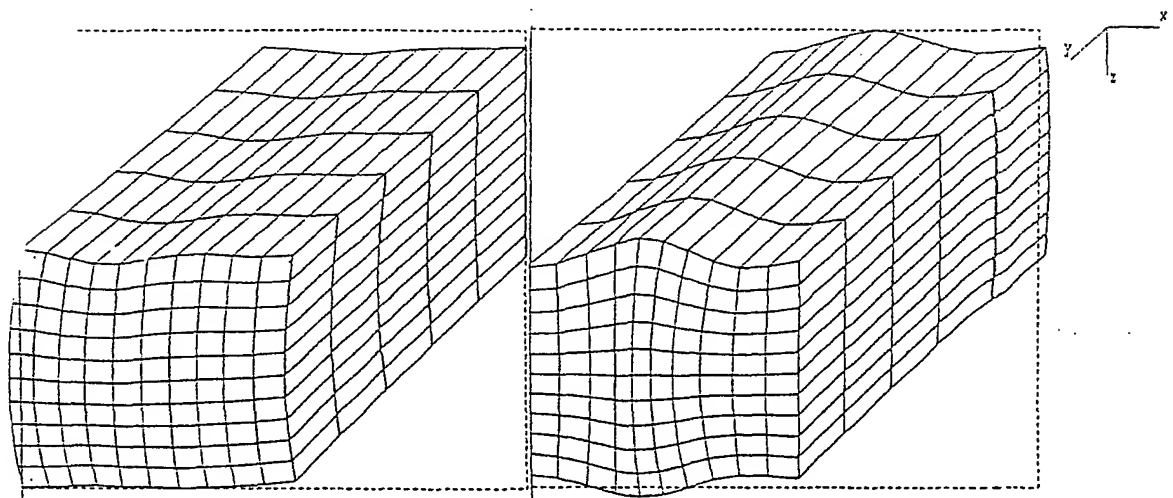


FIG. 15A

FIG. 15B